Draft

Statewide Water Advisory Group
Exempt Wells Subcommittee

Proposal: Water Information for Well Owners

March 5, 2007

Introduction:

On October 27, 2006, the Statewide Water Advisory Group (SWAG) established a subcommittee of its members to develop a list of issues related to exempt wells in Rural Arizona. Wells inside of Arizona's five Active Management Areas (AMAs) are classified as either exempt or not-exempt from the stipulations of the 1980 Groundwater Management Act (GMA). Exempt wells are wells inside of AMAs that pump less than 35 gallons per minute. However, outside of the five AMAs, essentially all wells are exempt from the regulations of the GMA, regardless of capacity.

The Exempt Wells Subcommittee is currently developing a global list of issues and concerns regarding wells in Rural Arizona. However, the Exempt Wells Subcommittee has identified two issues of more immediate concern and request that the SWAG consider addressing these for possible inclusion with the 2007 Legislative Package.

Background:

Drilling private wells is a common approach to developing lands in Arizona's rural regions. Owners of properties located at a distance from a community water system have few other options for developing a water supply. Typically, these small domestic wells use a small amount of water, estimated to be less than one (1) acre-foot per year (325,851 gallons).

In most of Arizona's rural groundwater systems, groundwater development is limited due primarily to a relatively small population. However, several groundwater basins have experienced or will experience significant growth. The increasing development of groundwater within these basins appears to be over-stressing the groundwater supplies, possibly creating well to well interference, reducing the reliability of water for all users within the basin and possibly impacting streams and downstream water right holders.

Property owners invest thousands of dollars in their wells and on the improvements that rely on that source of water, often without much understanding of the security of that investment. They typically have little or no information about aquifer conditions, the effects that their pumping may have on other water users (including the beneficial use rights of surface water users) or even their own future supply. By choosing to develop wells, individuals become their own water supply managers but often lack the benefit of knowing how long that water supply may last or the risks inherent in developing that supply.

The Arizona Legislature has established consumer protection programs for property owners within legal subdivisions. The Assured Water Supply (applicable to AMAs) and Adequate Water Supply Programs (applicable outside of AMAs) provide some measure of water security (physical and legal availability) for individual property owners in subdivisions, but no program exists for property owners outside of subdivision boundaries.

Issue: Well Owner's make water supply decisions without the benefit of adequate information

Well owners often lack the proper hydrologic and engineering information to help them develop an adequate or long-term water supply. In some areas of the State, new wells last for just a few years before they need to be deepened or replaced. Pre-existing wells that could have lasted for decades or more are competing for the same water supply as the newer wells and also have to be deepened or replaced. Many of these situations could have been prevented if the well owners had a strategic solution to develop a long-term water supply, but they usually lack the necessary hydrologic information to develop a more dependable water supply. This lack of information is a concern in most parts of the state, but it is a serious issue in certain groundwater basins that have experienced or will experience significant growth. The SWAG Exempt Well subcommittee has identified select basins in Arizona where there are either current or anticipated circumstances of wells going dry, well to well impacts, or impacts to groundwater and surface water resources caused by large numbers of wells or high concentrations of wells. These groundwater basins are:

- Upper San Pedro River basin
- Verde River Basin (Including Prescott AMA)
- Mohave County
- Santa Cruz AMA
- Sulphur Springs Valley

Solution: Develop better hydrologic information for critical groundwater basins and provide that information to property owners applying for a well permit.

Increasing the hydrologic database and providing suggestions to new well owners that will help them develop a more stable water supply and protect their property investment. This information will also provide valuable information to better plan for the long-term use of the water resources on a regional basis. The process will include two primary steps: 1) developing data and analyzing results and 2) summarizing results in a readily understandable fashion and disseminating that information to prospective well owners.

<u>Developing Data and Analyzing Results</u>

The first step in this process will be to develop and analyze hydrologic data, where lacking, and provide an interpretation of results in layman's terms. This includes developing a better understanding of aquifer conditions and water uses. Finally, this information can be distributed back to well owners to help them develop a more secure supply of water. The following proposal will apply only to the groundwater basins listed above, other

groundwater basins may also participate in this program based on decision of the Director by petition of the residents:

- Develop a Better Understanding of Aquifer Conditions:
  - Develop Groundwater Level Maps
  - Develop maps showing perennial and intermittent streams (as defined by ADWR)
  - Develop Groundwater Level Monitoring Network
  - Develop Surface Water Monitoring Network
  - Provide updates every five (5) years
  - Develop Numeric Groundwater Models

- Develop a Better Understanding of Water Uses:
  - Purpose & Need – Accurate information about groundwater uses is critical to developing a better understanding of water sustainability for well owners. Although well driller's typically understand the locations and depths of where groundwater can be found, they are not able to provide an estimate of how long the water supply could last. Arizona contains over 145,000 active wells (ADWR well registration database), but only xxx wells within the five AMAs are metered according to the requirements of the 1980 Groundwater Management Act. Of the total number of active wells, approximately 100,000 wells are classified as pumping less than 35 gpm; most of these are assumed to provide water for domestic uses. However, ADWR has virtually no direct information about the amount of water pumped by the majority of wells within the state. For the small domestic wells, estimates currently in use for planning purposes range from around 0.3 acre-feet/year to 0.9 acre-feet/year. Developing an estimate about the sustainability of a water supply based on a guess will greatly impact results about the aquifer's ability to meet needs. Proposed here is a program to meter and report water uses on new wells for a two year period to increase the knowledge base of water uses from unregulated wells. Although this program is limited in scope, it is anticipated that over time a statistically valid quantity of water use will be developed to aid in the hydrologic understanding of the listed groundwater basins, thereby assisting all water users in that basin to plan for long-term water supplies.
  - For all new wells:
    - Require a full-capacity pump test after the pump is installed
  - For non-agricultural wells pumping more than 35 gpm:
    - Require well meters on wells permitted after January 1, 2008.
    - Require annual reporting of water uses to ADWR by the property owner.
  - For residential, commercial, industrial and community water system wells pumping 35 gpm or less:
    - Establish a statewide "Meter Bank" from which well meters can be borrowed for temporary installation on new wells.
    - Require that water production wells installed after January 1, 2008 have a temporary meter installed. The meter can be removed and returned to the meter bank 2 years after issuance of the Certificate of

Occupancy (residential) or 2 years after water use begins (at the property owner's expense) provided that two2) consecutive years of water use data has been reported. A ($200?) deposit will be required for each meter, refundable after it is returned. A replacement for a meter that malfunctions will be provided with no additional deposit unless the meter is broken through some action of the property owner.

- Establish a program to maintain the privacy of the reporting well owner
    - Use the services of a third party not associated with ADWR to collect water use data and report the average monthly water uses by use category and groundwater basin to ADWR.
- Establish legal protection of the water use data to ensure that individual water use data cannot be subpoenaed by Courts or otherwise used for regulatory purposes
- Incentive options for reporting water uses:
    - Increase well permit fees for all well permits. Refund a portion of the fee if two consecutive years of water use data is submitted to ADWR. Permit fees that are not refunded can offset costs for administering the program.
    - Provide a one-time nominal tax credit for anyone wishing to install a permanent meter on a new or existing well. Tax credits are valid for each year that the property owner reports monthly water uses. Two consecutive years of water use data constitute eligibility for the tax credit. (Tax credit to offset cost of metering, to be paid through the water development fund?)
    - Well owners would be required to collect and report two consecutive years of water use to obtain the well completion report (or a new certificate such as a "Certificate of Water Use Reporting"). Except within the first two years after the well is installed, a property owner would not be able to sell the property unless the property owner has obtained the well completion report. [A change in statute is required to make the well completion report concept effective.]
- Establish a water use audit program to check for the validity of water use reports. This will constitute either:
    - Recording the initial and final readings of meters loaned through the meter bank
    - Access to properties with well meters by ADWR staff.

Summarizing and Disseminating Information to Prospective Well Owners

- Analyze and disseminate hydrologic data to Well Permit Applicants, Well Drillers and Property Owners – the information should describe in general terms:
    - Groundwater levels
    - Proximity to critical surface water areas/sources

    - Predicted annual groundwater declines (if applicable)
    - Suggested depth of the well to obtain a long-term supply
    - Suggestions on well construction design specific to the hydrologic conditions found at the proposed well location
    - To the best obtainable degree of accuracy, the location of all known wells within a 1 mile radius of the proposed well location and the location of high capacity wells (wells with a permitted pumping capacity of greater than 200 gpm) within a 3 mile radius of the proposed well location.
    - An estimate of the aquifer's ability to sustain the current level of pumping
    - Information regarding the well owner's responsibility in a legal proceeding regarding water rights, including an explanation about how a well, due to its proximity to a critical surface water area, could require a surface water right.
    - General information about groundwater rights and the rights of other property owners to pump the same groundwater resource
    - A statement that the information supplied does not guarantee a long-term supply of water
- Format of the hydrologic information:
    - The hydrologic data made available to well owners and well drillers should be contained and disseminated in the following formats:
        - ADWR should develop a Geographic Information System (GIS) database & map of the applicable information described above. The well permit applicant will provide the location of the proposed well to ADWR. Upon entering the information into the GIS map, ADWR will be able to retrieve the required information for the well permit applicant. The required information should be provided to the well applicant as a printout with an accompanying brochure to help interpret, in layman terms, the results of the printout. The brochure should also contain other information listed above that is not applicable to the GIS map format and other general information regarding responsibilities of well ownership and water resources.
- The Arizona Department of Water Resources (ADWR) should be the agency responsible for developing and disseminating the information. ADWR will require additional staff and monetary resources to administer this program. Many community water systems replace or upgrade meters on a regular basis. A large percentage of these meters can be placed back into service after being tested. An incentive could be given to community water systems for donating replaced but working meters. For instance, a meter donation program could be one of the water conservation measures adopted by public water systems under the proposed NPCCP program.
- Well drillers file most of the well permit applications but may not provide information about hydrologic conditions to the eventual well owner. The well permit application should contain a signed and notarized form stating that the well permit applicant has provided the hydrologic information to the well owner (property owner).